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A New Subspecies of *Platycerus consimilis* (Coleoptera, Lucanidae) Discovered on the Micang Shan Mountains in Northeastern Sichuan, Southwest China

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Abstract A new subspecies of *Platycerus consimilis* is described from the Micang Shan Mountains of northeastern Sichuan, Southwest China, under the name *P. c. phagophilus*.

In the autumn of 2004, I visited the Micang Shan Mountains in northeastern Sichuan of Southwest China, with the purpose of a faunal survey of the lucanid genus *Platycerus*. Until that time, nothing had been known on the *Platycerus* fauna of this mountain range, though that of the Daba Shan Mountains, the southeastern continuation of the Micang Shans, was well-investigated and known to be composed of as many as four species belonging to the same genus, namely, *P. rugosus*, *P. hongwonpyoi dabashanensis*, *P. businskyi bashanicus* and *P. kitawakii* (OKUDA, 1997; IMURA & TANIKADO, 1998). Of these, the former two belong to the group of *P. acuticollis* and the latter two are the members of the group of *P. delicatulus*. Viewed from the location and still richly wooded environment, I expected that the Micang Shan Mountains must harbour at least two or more *Platycerus* species.

With the aid of Yoshiyuki NAGAHATA by whom I was accompanied, my estimation has soon turned into reality, at least partly. Investigating only for a few hours on the first day of our stay on the Micang Shans, we succeeded in collecting a series of *Platycerus* belonging to the group of *P. delicatulus* in a forest of beech tree near the village of Daba in the central part of the same mountain range. At first sight, it reminded us of the species identical with or very closely related to *P. businskyi* known from the Qinling Mountains of southern Shaanxi (IMURA, 1996) and Dashennongjia of western Hubei (IMURA, 2002) as well as the Daba Shan Mountains as mentioned above. To our surprise, however, its genital organ well agreed in every detail with that of *P. consimilis* described by TANIKADO and TABANA (1998) from Miyaluo of Li Xian in central Sichuan, which is about 400 km distant to the southwest from the central part of the Micang Shans. In this article, I am going to introduce the Micang Shan race into science as a new subspecies of *P. consimilis* under the name of *phagophilus*.

I wish to express my deep gratitude to Mr. Yoshiyuki NAGAHATA (Yonezawa), Mr. FAN Ting (International Academic Exchange Center of the Academia Sinica,

Chengdu) and Miss CHEN Li (Academia Sinica, Chengdu), from whom I have received invaluable aid in the field investigation. Also I thank Dr. Kunio ARAYA (Graduate School of Social and Cultural Studies, Kyushu University) for his kind advice and co-operation for my study on *Platycerus*, and Mr. Motohiko TANIKADO (Ibaraki) for kindly providing me the paratypes of *P. consimilis*. Hearty thanks are due to Dr. Shun-Ichi UÉNO (National Science Museum, Tokyo) for revising the manuscript of this paper.

Platycerus consimilis phagophilus IMURA, subsp. nov.

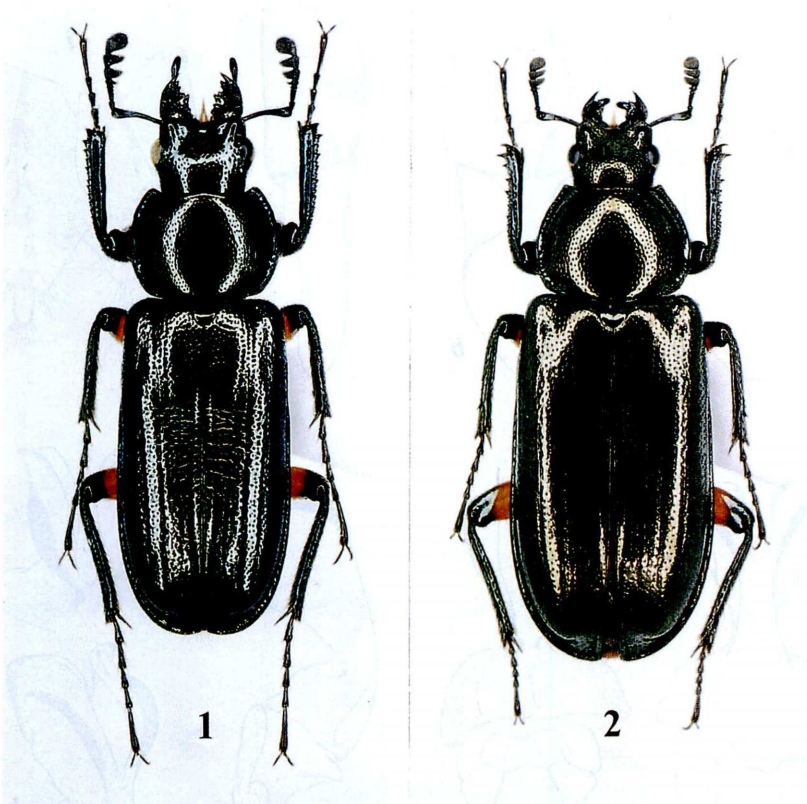
(Figs. 1–3, 6)

Description. Length (including mandibles): ♂ 9.45–10.50 (mean 10.00) mm; ♀ 9.40–10.50 (mean 9.92) mm. Discriminated from the nominotypical subspecies in the following points: 1) coloration of dorsal surface lighter, much more strongly greenish in male and golden coppery bearing a faint greenish tinge in female; 2) front angles of pronotum a little less sharply pointed at tips; 3) central parts of elytra more strongly depressed and a little less remarkably rugulose. Male genital organ almost as in the nominotypical race, but a pair of visor-like protuberances on ventral margin of median lobe narrower and situated a little nearer to the apex.

Type series. Holotype: ♂, ca. 3 km north-northwest from Daba [大坝], 1,550–1,650 m in altitude, the Micang Shan National Forest Park [米仓山国家森林公园], in northern Nanjiang Xian [南江县], of northeastern Sichuan, Southwest China, 2～5–XI–2004, Y. IMURA & Y. NAGAHATA leg., preserved in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo. Paratypes: 9♂♂, 8♀♀, same data as for the holotype, preserved in the collection of Y. IMURA.

Notes. Before the discovery of the present new race, we assumed that the *Platycerus* fauna of the Micang Shan Mountains might be most closely related to that of the Daba Shan Mountains, since the former are the northwestern continuation of the latter. It was therefore unexpected that the species found on the Micang Shans was not referable to any of the four species occurring on the Daba Shans but apparently conspecific with that inhabiting Li Xian in central Sichuan, which is about 400 km distant to the southwest from the type locality of the new subspecies. This discovery is very important from the zoogeographical viewpoint, since it becomes the positive proof of a close faunal relationship of the Micang Shan Mountains in northeastern Sichuan to the mountainous regions in central Sichuan concerning the lucanid beetles of the genus *Platycerus*, though a similar relationship had already been suggested by the members of ground beetles. For example, a peculiar procrustimorphous carabid, *Shenocoptolabrus osawai*, is known from both the Micang Shans and Mao Xian of central Sichuan, but not recorded from the Daba Shans (IMURA, 2000; DEUVE, 2003).

The present new subspecies inhabits the forest of deciduous broad-leaved trees mainly composed of *Fagus pashanica* and *F. engleriana* now sporadically preserved around Daba Village in the central part of the Micang Shan Mountains (Fig. 4). All the



Figs. 1–2. *Platycerus consimilis phagophilus* subsp. nov., from the Micang Shan Mountains in northeastern Sichuan (1, ♂, holotype; 2, ♀, paratype).

imagines collected were hibernating in white-rotten cortex of withered wood either still standing or already fallen down (Fig. 6). From the same environmental condition, were discovered not a few larvae of *Platycerus* most probably referable to the same race. As is observed in other members of the same genus distributed in the Eurasian Continent and Japan, the present new race leaves a peculiar oviposition mark on the surface of its food plant (Fig. 5). Of the totally 18 imagines collected, 16 were from *Fagus pashanica* and the remaining two were from *Quercus aliena* and *Enkianthus* sp., respectively.

Together with the type series of the new subspecies, one female imago of a strange *Platycerus* was also collected from the same forest. Though closely resembling each other, it is definitely different from the new race in details. For example, front angles of the pronotum are not protruded anteriorly, the elytra are robuster and the gonocoxite is a little different in the shape. In my view, it is most probable that this female is referable to *P. businskyi*. However, I will suspend judgment on its taxonomic account

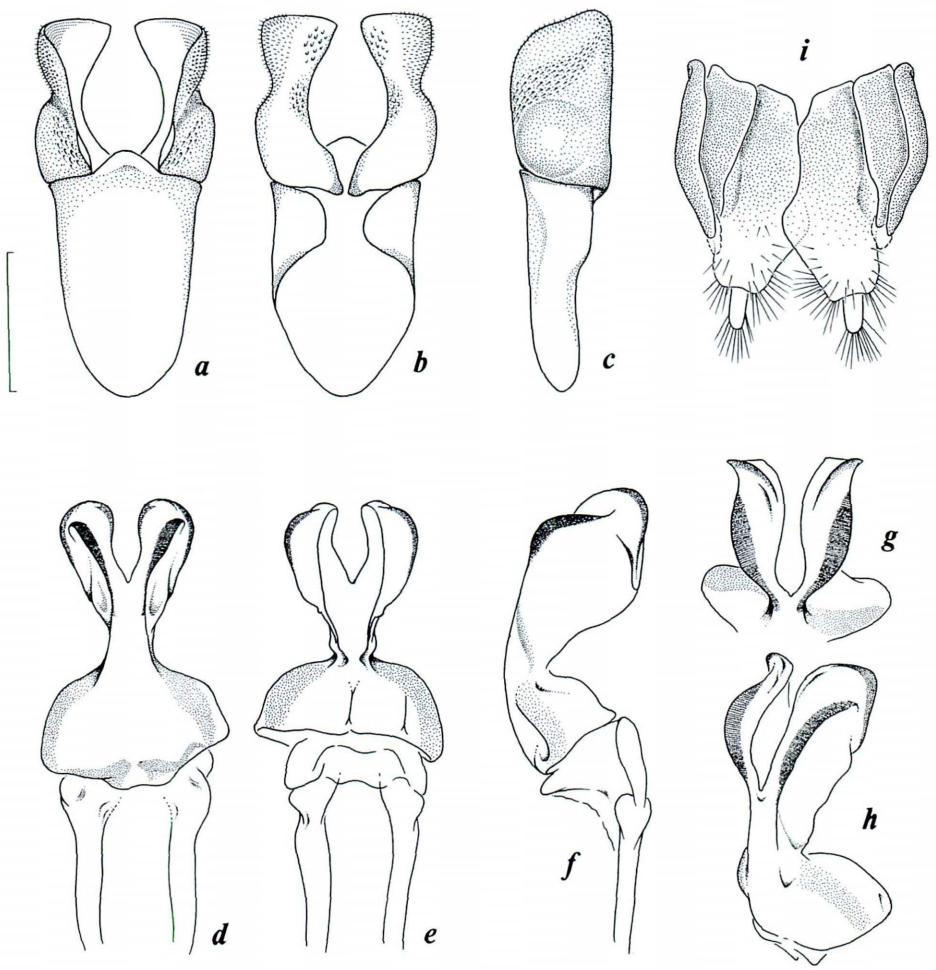
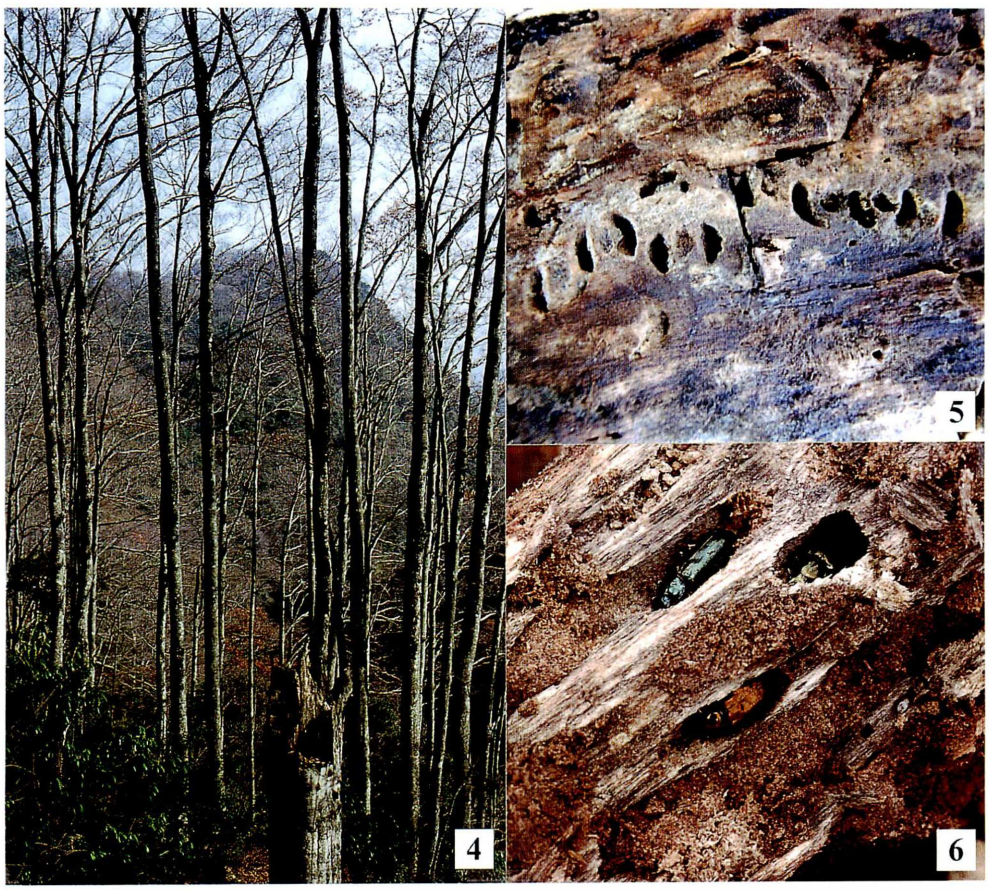


Fig. 3. Genital organ of *Platycerus consimilis phagophilus* subsp. nov. from the Micang Shan Mountains in northeastern Sichuan. —— a–c, Lateral lobe of aedeagus ; d–h, median lobe of aedeagus; i, gonocoxite of female genitalia. —— a & d, Ventral view; b, e & i, dorsal view; c & f, right lateral view; g, view from aedeagal apex; h, right subventral view. Scale: 1 mm for a–c, 0.54 mm for d–i.

until I can examine more specimens including the male.

In addition, not a few larvae of *Platycerus* were also found from softly rotten small branches lying on the forest floor. Though impossible to make a reliable identification on the morphology of the larvae alone, they may belong to the third species, since they were obtained from the environmental condition usually favored by the species belonging to the group of *P. acuticollis*. Anyway, it is highly probable that there inhabit at least two or more different species of *Platycerus* on the Micang Shan Mountains as mentioned in the introduction of this paper.



Figs. 4–6. Habitat, oviposition mark and imagines in hibernation of *Platycerus consimilis phagophilus* subsp. nov. —— 4, Habitat (forest of *Fagus pashanica* near Daba on the Micang Shan Mountains in northeastern Sichuan); 5, oviposition mark left on the surface of withered wood; 6, imagines hibernating in white-rotten wood of *Fagus pashanica* (photograph by Y. NAGAHATA in November 2004).

Etymology. The new subspecific name is composed of two Latinized Greeks, *phagos* and *phileo*, meaning *beech tree* (*Fagus*) and *love*, respectively, since the new race closely depends on this plant on the Micang Shan Mountains.

要　　約

井村有希：中国四川省米仓山から発見されたミヤマルリクワガタの1新亜種．——中国四川省北東部の米仓山からはこれまで，ルリクワガタ属の記録がなかったが，2004年の秋に行った現地調査により，同属の1種が採集された．詳細な検討の結果，この種は，同省中部理县の米亚罗から記載されたミヤマルリクワガタに一致するものと考えられたが，背面の色彩，前胸

背板の形態，上翅の彫刻，そして陰茎中央葉の形態などに一定の差異が認められたため，その生息環境にちなみ，*phagophilus*という新亜種名を与えて記載した．米仓山は大巴山系の北西端に位置しているため，そのルリクワガタ相はとうぜん，山系中央部にある大巴山との共通要素が多いのではないかと思われていた．しかしながら，発見された種が大巴山に産する4種のいずれとも異なり，南西方向に400 kmも隔たった四川省中部に生息しているものと同じであったことは，生物地理学的にみても，また中国におけるルリクワガタ属の系統や分布の成り立ちを考えるうえにおいても，きわめて興味深い．なお，同山塊からは他に，形態のやや異なる♀成虫および環境条件の異なる朽木に入っていた複数の幼虫が得られており，少なくともう1~2種のルリクワガタ属が生息している可能性が高いが，それらの分類学的処遇については♂を含む複数の成虫を検することができるまで保留としておきたい．

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